

**Flood Control Project Maintenance
Levee Inspections**

Fall 2012 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

ST0012	Overall LMA Rating	Total LMA Miles						
Sacramento Maintenance Yard Willow Slough Bypass	A	12.46						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Vegetation					0.13			
Encroachments					0.47			
Erosion / Bank Caving	0.05		0.05	0.40%				
Cracking	0.02		0.02	0.16%			0.14	
<i>LMA Totals:</i>	0.07	0.00	0.07	0.56%	0.60	0.00	0.14	0.00
Unit No. 01 Willow Slough Bypass or North Levee LB	Overall Unit Rating	Total Unit Miles						
ST0012	A	5.09						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Vegetation					0.13			
Encroachments					0.47			
Cracking	0.02		0.02	0.39%			0.14	
<i>Unit Totals:</i>	0.02	0.00	0.02	0.39%	0.60	0.00	0.14	0.00
Unit No. 02 Willow Slough Bypass or South Levee RB	Overall Unit Rating	Total Unit Miles						
ST0012	A	7.37						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Erosion / Bank Caving	0.05		0.05	0.68%				
<i>Unit Totals:</i>	0.05	0.00	0.05	0.68%	0.00	0.00	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2012 Levee Inspection Results

Sacramento Maintenance Yard Willow Slough Bypass

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
* Overall LMA Rating (Fall Only)			A	

** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

*
SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Sacramento Maintenance Yard Willow Slough Bypass

Waterway			Bank	Unit Miles
Unit No. 01 Willow Slough Bypass or North Levee			Left	5.09
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	03/22/2012 - 03/22/2012		10/31/2012 - 10/31/2012	
DWR Inspector	John Williamson		John Williamson	
Accompanied By	Casey Lund Sac maint.		Casey Lund Sac maint.	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Sacramento Maintenance Yard Willow Slough Bypass

Waterway						Bank	Unit Miles	Inspection Start/End	Inspector	
Unit No. 01 Willow Slough Bypass or North Levee						Left	5.09	10/31/2012 10/31/2012	John Williamson	
LMR No.	Levee Mile		Category	Item	Location * + Rating	Action/Comment	GPS Latitude/Longitude		Issue No.	Photo
	Start	End					Start	End		
1			Earthen Levee	Operations & Maintenance Manuals	LS Ma		°	°	6	
DWR ID: DWR_ST0012_01_s_2012_6										
2			Earthen Levee	Emergency Supplies & Equipment	LS Ma		°	°	7	
DWR ID: DWR_ST0012_01_s_2012_7										
3			Earthen Levee	Flood Preparedness & Training	LS Ma		°	°	8	
DWR ID: DWR_ST0012_01_s_2012_8										
4	0.02	0.15	Earthen Levee	Vegetation	CR En	V6 : Landscaping Inspector Comments: This is the treatment plant's landscaping and chain link fence.	38.590742 ° -121.665767 °	38.590716 ° -121.668203 °	1 Y	
DWR ID: DWR_ST0012_01_s_2012_1										
5	0.07	0.21	Earthen Levee	Cracking	WS Ob	CR1 : Monitor and have inspected by geotechnical engineer.	38.590724 ° -121.666749 °	38.590663 ° -121.669190 °	10 Y	
DWR ID: DWR_ST0012_01_f_2012_10										
6	0.34	0.36	Earthen Levee	Cracking	WS Ma	CR1 : Monitor and have inspected by geotechnical engineer.	38.590610 ° -121.671603 °	38.590600 ° -121.672082 °	2 Y	
DWR ID: DWR_ST0012_01_s_2012_2										
7	4.16	4.63	Earthen Levee	Encroachments	LS En	DT : Ditch	38.597093 ° -121.737883 °	38.599857 ° -121.745158 °	4 Y	
DWR ID: DWR_ST0012_01_s_2012_4										

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
N : Not Inspected/Rated
C : Corrected
A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Sacramento Maintenance Yard Willow Slough Bypass

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Willow Slough Bypass or North Levee	Left	5.09	10/31/2012 10/31/2012	John Williamson

Levee Mile Report Line	4
Start Levee Mile	0.02
End Levee Mile	0.15
Location	Crown
Category	Earthen Levee
Item	Vegetation

The treatment plant's landscape and fence. This runs along the crown and toe of the levee.

johngw_f_20120911_692.jpg



Levee Mile Report Line	4
Start Levee Mile	0.02
End Levee Mile	0.15
Location	Crown
Category	Earthen Levee
Item	Vegetation

Photo taken spring 2012, the treatment plants landscaping.

johngw_f_20120911_693.jpg



Levee Mile Report Line	5
Start Levee Mile	0.07
End Levee Mile	0.21
Location	Water Side
Category	Earthen Levee
Item	Cracking

There is still cracking sloughing on the waterside crown. Attempts to fill in the cracks all along the roadway have been done.

johngw_f_20121105_827.jpg



* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Sacramento Maintenance Yard Willow Slough Bypass

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Willow Slough Bypass or North Levee	Left	5.09	10/31/2012 10/31/2012	John Williamson

Levee Mile Report Line	6
Start Levee Mile	0.34
End Levee Mile	0.36
Location	Water Side
Category	Earthen Levee
Item	Cracking
Photo taken spring 2012, cracking along the waterside shoulder.	
johngw_f_20120911_694.jpg	



Levee Mile Report Line	6
Start Levee Mile	0.34
End Levee Mile	0.36
Location	Water Side
Category	Earthen Levee
Item	Cracking
Photo taken 2012, the shoulder has fallen 4"-6" in depth.	
johngw_f_20120911_695.jpg	



Levee Mile Report Line	6
Start Levee Mile	0.34
End Levee Mile	0.36
Location	Water Side
Category	Earthen Levee
Item	Cracking
This is the worst area and it has been cosmetically fixed. Fall 2012	
johngw_f_20121105_828.jpg	

*** Location**

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Sacramento Maintenance Yard Willow Slough Bypass

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Willow Slough Bypass or North Levee	Left	5.09	10/31/2012 10/31/2012	John Williamson

Levee Mile Report Line	7
Start Levee Mile	4.16
End Levee Mile	4.63
Location	Land Side
Category	Earthen Levee
Item	Encroachments

The agricultural ditch runs along the toe of the levee. Fall 2011

johngw_f_20120911_697.jpg



Levee Mile Report Line	7
Start Levee Mile	4.16
End Levee Mile	4.63
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Another view of the agricultural running along the toe of the levee. Fall 2011

johngw_f_20120911_698.jpg



Levee Mile Report Line	7
Start Levee Mile	4.16
End Levee Mile	4.63
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Photo take spring 2012, agricultural ditch along landside toe.

johngw_f_20120911_699.jpg



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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Sacramento Maintenance Yard Willow Slough Bypass

Waterway			Bank	Unit Miles
Unit No. 02 Willow Slough Bypass or South Levee			Right	7.37
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	03/22/2012 - 03/22/2012		10/31/2012 - 10/31/2012	
DWR Inspector	John Williamson		John Williamson	
Accompanied By	Casey Lund Sac maint.		Casey Lund Sac maint.	

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Levee Inspection Report By Mile - Fall 2012

Sacramento Maintenance Yard Willow Slough Bypass

Waterway				Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Willow Slough Bypass or South Levee				Right	7.37	10/31/2012 10/31/2012	John Williamson

LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
1	1.71	1.71	Earthen Levee	Erosion / Bank Caving	WS	M Ma	E1 : Note and monitor erosion site.	38.589966 ° -121.727072 °	38.589966 ° -121.727072 °	8 Y
DWR ID: DWR_ST0012_02_s_2012_8										
2	1.86	1.86	Earthen Levee	Encroachments	WSA/W	PI : Pipe Ma		38.589923 ° -121.724187 °	38.589923 ° -121.724187 °	1 Y
DWR ID: DWR_ST0012_02_s_2012_1										
3	1.86	1.86	Earthen Levee	Erosion / Bank Caving	WS	M Ma	E1 : Note and monitor erosion site. Inspector Comments: The owner of the pipe has placed two pipes in the channel. This is to pond the water for irrigation. It is possible that this started the erosion of the bank.	38.589922 ° -121.724185 °	38.589922 ° -121.724185 °	3 Y
DWR ID: DWR_ST0012_02_s_2012_3										
4	1.97	1.97	Earthen Levee	Erosion / Bank Caving	WS	M Ma	E1 : Note and monitor erosion site.	38.589906 ° -121.722218 °	38.589906 ° -121.722218 °	5 Y
DWR ID: DWR_ST0012_02_s_2012_5										
5	2.66	2.66	Earthen Levee	Erosion / Bank Caving	WS	M Ma	E1 : Note and monitor erosion site. Inspector Comments: The erosion is starting to encroach into the toe road.	38.589714 ° -121.709456 °	38.589714 ° -121.709456 °	9 Y
DWR ID: DWR_ST0012_02_s_2012_9										
6	2.90	2.90	Earthen Levee	Erosion / Bank Caving	WS	M Ma	E1 : Note and monitor erosion site. Inspector Comments: The site has a discharge pipe and has begun eroding around the pipe. It is also eroding into the toe road.	38.589707 ° -121.705044 °	38.589707 ° -121.705044 °	10 Y
DWR ID: DWR_ST0012_02_s_2012_10										
7	3.56	3.56	Earthen Levee	Encroachments	LS A/W	BU : Building En	Inspector Comments: Control structure for Davis Drain block building	38.589657 ° -121.692850 °	38.589657 ° -121.692850 °	2 Y
DWR ID: DWR_ST0012_02_s_2012_2										

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Sacramento Maintenance Yard Willow Slough Bypass

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Willow Slough Bypass or South Levee	Right	7.37	10/31/2012 10/31/2012	John Williamson

Levee Mile Report Line	1
Start Levee Mile	1.71
End Levee Mile	1.71
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Erosion on the edge of the channel. Fall 2012

johngw_f_20121105_829.jpg



Levee Mile Report Line	2
Start Levee Mile	1.86
End Levee Mile	1.86
Location	Water Side
Category	Earthen Levee
Item	Encroachments

A pipe crossing thru the levee and blocking toe road. Fall 2011

johngw_f_20120911_701.jpg



Levee Mile Report Line	3
Start Levee Mile	1.86
End Levee Mile	1.86
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Erosion on the edge of the channel. Fall 2012

johngw_f_20121105_830.jpg



*** Location**

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Sacramento Maintenance Yard Willow Slough Bypass

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Willow Slough Bypass or South Levee	Right	7.37	10/31/2012 10/31/2012	John Williamson

Levee Mile Report Line	4
Start Levee Mile	1.97
End Levee Mile	1.97
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Erosion on the edge of the channel. Fall 2012.

johngw_f_20121105_831.jpg



Levee Mile Report Line	5
Start Levee Mile	2.66
End Levee Mile	2.66
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Photo taken spring 2012, the eroision encroaches into the toe road.

johngw_f_20120911_712.jpg



Levee Mile Report Line	5
Start Levee Mile	2.66
End Levee Mile	2.66
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Erosion on the edge of the channel. Fall 2012

johngw_f_20121105_832.jpg



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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Sacramento Maintenance Yard Willow Slough Bypass

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Willow Slough Bypass or South Levee	Right	7.37	10/31/2012 10/31/2012	John Williamson

Levee Mile Report Line	6
Start Levee Mile	2.90
End Levee Mile	2.90
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

The slope around the discharge pipe is eroding the toe road. Rip rap could be placed around the pipe and re-sloped. Fall 2011

johngw_f_20120911_713.jpg



Levee Mile Report Line	7
Start Levee Mile	3.56
End Levee Mile	3.56
Location	Land Side
Category	Earthen Levee
Item	Encroachments

A control structure is placed on top of the levee. Fall 2011

johngw_f_20120911_702.jpg



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